



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/520,187

07/31/2006

Alfred Zollner

P04,0505

7606

26574

7590

01/24/2008

SCHIFF HARDIN, LLP
PATENT DEPARTMENT
6600 SEARS TOWER
CHICAGO, IL 60606-6473

EXAMINER

BRASE, SANDRA L

ART UNIT

PAPER NUMBER

2852

MAIL DATE

DELIVERY MODE

01/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/520,187

Applicant(s)

ZOLLNER ET AL.

Examiner

Sandra L. Brase

Art Unit

2852

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 and 42-53 is/are rejected.
- 7) ☒ Claim(s) 39-41 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/4/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figures 3 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 33 is objected to because of the following informalities: on line 2 of claim 33, "assumed as" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 27-34, 38, 43-48, 52 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al. (US 5,839,022).

5. Wang et al. (...022) disclose a device and a method for setting toner concentration of a toner particle-carrier particle mixture in a developer station (124) for development of a latent charge image on an intermediate carrier of an electrographic printer or copier, comprising the steps of: with a sensor (126) arranged in the developer station, measuring toner concentration in the mixture (col. 8, lines 9-11); with an actuator, to set a toner feed in the developing station, adjusting toner feed in the developer station (col. 8, lines 7-9); determining a current consumption value for toner particles (col. 8, lines 17-21); calculating from the toner concentration measured at an installation point of the sensor and from the toner consumption value a toner concentration at a location in the developer station at which the toner is extracted for development of the latent image (col. 8, lines 5-22; and figures 4 and 5); and inputting the calculated toner concentration at the toner extraction location as a control variable in a regulator, and with the regulator activating the actuator such that the calculated toner concentration at the toner extraction location approaches a desired value (col. 8, lines 5-22; and figures 4 and 5). The consumption value is estimated (col. 8, lines 5-22; and figures 4 and 5). The actuator is controlled by a combination of a first manipulating variable and a second manipulating variable, whereby the first manipulating variable is proportional to the toner consumption value and the second manipulating variable is proportional to the measured toner concentration (figures 4 and 5). The actuator is controlled by a sum of a first manipulating variable and a second manipulating variable, whereby the first manipulating variable is proportional to the toner consumption value and the second manipulating variable is proportional to the measured toner

concentration (col. 8, lines 5-22; and figures 4 and 5). The first manipulating variable is measured such that it effects a toner feed that corresponds to the current toner consumption value (col. 8, lines 5-22; and figures 4 and 5). The second manipulating variable is measured such that it regulates the toner concentration to a desired value (col. 8, lines 5-22; and figures 4 and 5). The toner feed set at the actuator is a toner consumption value (col. 8, lines 17-21; and figure 4). The toner consumption value is estimated from print data (col. 8, lines 17-21; and figure 4). The toner consumption value is estimated using current consumption of the character generator generating the latent charge image (col. 8, lines 17-22 and figure 4). The regulator parameters used by the regulator are varied in a course of the print or copy process (col. 8, lines 5-22; and figures 4 and 5). A current measurement device measures the current consumption of the character generator generating the latent charge image and an estimator which estimates the toner consumption value using the current consumption of the character generator (col. 8, lines 5-22; and figures 4 and 5).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 35-37 and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 5,839,022) in view of Suzuki (US 5,202,769).

9. Wang et al. (...022) disclose the features mentioned previously, but do not disclose the claimed counting of weighted pixels. Suzuki (...769) discloses a toner consumption value is estimated from a number of pixels to be printed, weighted with their inking level, that are set in a character generator generating a latent charge image (abstract; and col. 4, lines 18-61). The pixels are counted with aid of an application-specific integrated circuit that is connected with the character generator (abstract; and col. 4, lines 18-26; and figures 1 and 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed counting of weighted pixels, as disclosed by Suzuki (...769) so as to more accurately calculate toner consumption.

10. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 5,839,022) in view of Slabbaert et al. (US 5,974,279).

11. Wang et al. (...022) disclose the features mentioned previously, but do not disclose the regulator comprising a PID controller. Slabbaert et al. (...279) disclose a controller that is a PID controller. It would have been obvious to one of ordinary skill in the art at the time of the

invention to have the regulator comprise a PID controller, as disclosed by Slabbaert et al. (...279), since such a type of controller is well known in the art and would have predictable results.

Allowable Subject Matter

12. Claims 39-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is (571) 272-2131.

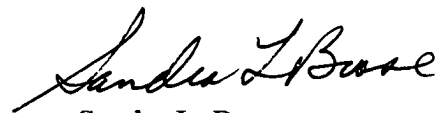
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray, can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Application/Control Number:
10/520,187
Art Unit: 2852

Page 7

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, reading "Sandra L. Brase".

Sandra L. Brase
Primary Examiner
Art Unit 2852

January 17, 2008